

PATENT SPECIFICATION

DRAWINGS ATTACHED

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Date of filing Complete Specification: March 2, 1966.

Application Date: March 2, 1965.

No. 8945/65.

Complete Specification Published: Sept. 27. 1967.

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Index at acceptance:—B7 B35

Int. Cl.:—B 62 b 3/02

COMPLETE SPECIFICATION

Improvements in or relating to Devices for Transporting Articles

We WARWICK PRODUCTION COMPANY LIMITED, a British Company, of Birmingham Road, Warwick, Warwickshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention is concerned with devices for transporting articles.

According to the invention, a device for transporting articles comprises, in combination, a trolley and a plurality of carriers removably supported on the trolley, the trolley comprising an upright frame provided with supports for supporting said carriers so that bottom walls thereof slope upwardly as they extend outwardly with respect to the frame, the supports being provided on opposite sides of the frame whereby the device is symmetrical about a central vertical plane.

Each carrier is preferably of trough-like shape, comprising two walls disposed at right angles. End walls may also be provided. When the tray is disposed on the trolley, one of said two walls disposed at right angles will constitute a bottom wall as aforesaid while the other will constitute a rear wall. The carriers preferably have hand-grips at each end.

The trolley preferably comprises an upright frame mounted on ground wheels, from which frame project pairs of parallel arms constituting the aforesaid supports. The arms may be of L-section to receive and locate the ends of the carriers.

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawing, the

single figure of which is a perspective view of a book trolley and carriers.

The device illustrated in the figure includes a trolley comprising a horizontal rectangular base frame 10 having four castor wheels 11 at its corners. Fixed to the centres of the two shorter sides of the base frame are two vertical parallel pillars 12 which are connected by cross-bars 13 so as to form an upright frame. At the top of each pillar 12 is provided a cross-piece 14 extending in opposite directions from and at right-angles to the plane of the upright frame and fitted with rubber hand-grips 15.

Two pairs of parallel supporting arms 16, 17 project outwardly on each side of the plane of the upright frame 12, 13 at spaced positions intermediate in the height thereof, each pair of arms being disposed directly opposite to another pair of arms 18 and 19 respectively on the opposite side of the upright frame so that the assembly is symmetrical. Each arm is L-shaped in cross-section, having an upright flange and a bottom flange. The bottom flanges of each pair of arms, 16, 17, 18, 19 are directed towards each other. The arms are inclined upwardly as they extend away from the upright frame.

A carrier 20 is removably supported by each pair of arms. Each carrier 20 is of trough-like shape and comprises two long planar walls at right angles to each other and triangular end walls. The carrier rests on its arms 16, 17, 18 or 19 with one long wall constituting a bottom wall and supported at the ends on the bottom flanges of the arms. The carrier is located at its ends by the upright flanges of the arms. On the outside of each triangular end wall is provided a carrying handle 21. Two further carriers

[Price 4s. 6d.]

20 constructed as described above are removably supported by the base frame 10 on opposite sides of the upright frame. The base frame 10 is provided with abutments 22 for engaging the two carriers supported thereby to hold each carrier in a similar attitude to the other carriers, i.e. with its bottom wall sloping upwards and outwards. These abutments 22 suitably comprise lugs fixed in L-section members constituting the end members of the base frame 10 and the slope of the carrier bottom walls results from these walls resting at their outer parts on the side members of the base frame 10.

15 The carriers may be made from aluminium sheet.

The embodiment described above is particularly suitable for transporting books in a library, since the carriers 20 are in the form of temporary book-shelves. Accidental displacement of books is unlikely as the result of the sloping bottom walls of the carriers. When the carriers are loaded with books, the trolley bearing the carriers is moved to a desired location. The books can then be unloaded individually or, if desired, carriers with their books can be unloaded separately and taken to different places. The device can of course be used for other purposes, e.g. transport of articles when loading the shelves of a super-market.

WHAT WE CLAIM IS:—

35 1. A device for transporting articles comprising, in combination, a trolley and a plurality of carriers removably supported on the trolley, the trolley comprising an upright frame provided with supports for supporting said carriers so that bottom walls thereof slope

upwardly as they extend outwardly with respect to the frame, the supports being provided on opposite sides of the frame whereby the device is symmetrical about a central vertical plane. 40

2. A device as claimed in claim 1 wherein each carrier is of trough-like shape, having planar walls. 45

3. A device as claimed in claim 2 wherein each carrier comprises two planar walls disposed at right angles.

4. A device as claimed in claim 2 or claim 3 wherein each carrier has triangular end walls. 50

5. A device as claimed in any one of claims 1 to 4 wherein the carriers have hand-grips at each end. 55

6. A device as claimed in any one of claims 1 to 5 wherein pairs of parallel arms extend from said frame to constitute said supports.

7. A device as claimed in claim 6 wherein said arms are of L-section to receive and locate the ends of the carriers. 60

8. A device as claimed in any one of the preceding claims wherein the upright frame is secured to a base frame mounted on ground wheels and said base frame serves as supports for two of said carriers. 65

9. A device for transporting articles substantially as described herein with reference to the accompanying drawing.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

